

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An oil reconversion device for waste plastics ~~characterized by the fact that in an oil reconversion device for waste plastics which performs thermal cracking by heating a waste plastic and converts the generated cracker gas into oil by cooling, and is equipped with~~ the oil reconversion device comprising:

a thermal cracking bath which has a bath main body placed inside a coil, ~~induction-heats the thermal cracking bath being adapted to induction-heat~~ the bath main body by feeding a high-frequency current through the coil, and to thermally cracks-crack at least a molten plastic obtained from the waste plastic to generate a cracker gas,

an injection port through which the waste plastic is injected,

a feeder which supplies the waste plastic injected through the injection port to the thermal cracking bath via a forced or direct feeding means without a bath, and

an oil conversion processor which cools and converts the cracker gas generated by the thermal cracking bath into oil,

wherein the thermal cracking bath includes an agitating mechanism having an agitate-scraping unit,

wherein the agitate-scraping unit is adapted to agitate a molten plastic contained in the bath main body, and to scrape the molten plastic adhering to the inner wall of the bath main body, and

the agitate-scraping unit includes a heater capable of heating a top surface of the molten plastic contained in the bath main body.

2. (Currently Amended) The oil reversion device for waste plastics described in claim 1 ~~characterized by the fact that~~ wherein the feeder is equipped, as a forced feeding means, with an extruder having a heating cylinder, and an extruding screw which melts and extrudes the waste plastic injected into the injection port.

3. (Currently Amended) The oil reversion device for waste plastics described in claim 1, ~~characterized by the fact that~~ wherein the feeder is equipped, as a direct feeding means, with a waste plastic injector ~~which has~~ with a hopper that is adapted to inject the waste plastic into the bath main body, and

wherein the feeder has an includes:

an open/close cap to open/close the injection port of this of the hopper, and to open/close an injection path between the hopper and the bath main body, and ~~is constructed so that~~

an air feeding port capable of sending an inert gas can be sent into the hopper.

4. (Currently Amended) The oil reversion device for waste plastics described in claim 3, ~~characterized by the fact that~~ wherein the waste plastic injector has an injection pipe composing the injection path, and ~~is constructed by installing the~~

wherein an open/close valve to this and an open/close damper are connected to the injection pipe, and installing an open/close damper to the injection pipe in the open/close damper being connected to the injection pipe between the bath main body-side of and the open/close valve.

5. (Currently Amended) The oil reversion device for waste plastics described in claim 3 ~~characterized by the fact that~~ wherein the thermal cracking bath ~~also functions as the~~ is a melting bath which melts the waste plastic.

6. (Cancelled)

7. (Cancelled)

8. (Currently Amended) The oil reversion device for waste plastics described in claim 1, ~~characterized by being equipped with~~ further comprising a residue processor which ~~collects and heats~~ is adapted to collect and heat residue plastic generated inside the bath main body, and ~~supplies to supply~~ a generated cracker gas to the oil conversion processor.

9. (Currently Amended) The oil reversion device for waste plastics described in claim 1, ~~characterized by being equipped with~~ further comprising an off-gas processor

having a burn processor which ~~burns~~ is adapted to burn an off-gas generated ~~in the~~ in processes of sequentially processing the waste plastic at a specified temperature or higher.

10. (Cancelled)

11. (Currently Amended) The oil reversion device for waste plastics described in claim 8, ~~characterized by being equipped with further comprising~~ an off-gas processor having a burn processor which ~~burns~~ is adapted to burn an off-gas generated ~~in the~~ in processes of sequentially processing the waste plastic at a specified temperature or higher.